

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A process for preparing hydrogenated condensed Palatinose, comprising the catalytic hydrogenation of a solution comprising condensed Palatinose.
2. (Currently Amended) The process of claim 1, ~~comprising the hydrogenation of~~ wherein the condensed Palatinose ~~obtainable~~ is obtained by heat-treating an aqueous Palatinose solution having a pH of 3 to 6 at a temperature of 100°C to 170°C under atmospheric pressure or reduced pressure.
3. (Original) The process of claim 2, wherein the aqueous Palatinose solution to be condensed is prepared by dissolving Palatinose in water.
4. (Currently Amended) The process of claim 2 ~~or 3~~, wherein acidic catalysts are added to the aqueous Palatinose solution.
5. (Currently Amended) The process of claim 4, wherein the acidic catalysts ~~added~~ are selected from the group consisting of H⁺-loaded, strongly acidic cation exchangers, organic acids, boric acid, and a combination of phosphoric acid with potassium dihydrogen phosphate or ammonium sulfate.
6. (Original) The process of claim 5, wherein the organic acids are selected from the group consisting of citric acid, malic acid, succinic acid and tartaric acid.
7. (Currently Amended) The process of ~~any one of claims~~ claim 2 to 6, wherein the condensed Palatinose is ~~obtainable~~ obtained by heat-treating an aqueous Palatinose solution in

the presence of 0.02% by weight citric acid, based on Palatinose, in vacuo at a temperature of 135°C.

8. (Original) The process of claim 7, wherein the condensed Palatinose comprises about 48% uncondensed Palatinose, about 28% Palatinose dimers, about 12% Palatinose trimers, about 5% Palatinose tetramers, about 5% Palatinose pentamers, and about 2% hydrolysis products.

9. (Currently Amended) The process of claim 1, comprising hydrogenating condensed Palatinose ~~obtainable~~ obtained by reacting Palatinose with anhydrous hydrofluoric acid at a temperature of 0°C to 20°C.

10. (Original) The process of claim 9, wherein the condensed Palatinose comprises about 73% to 94% Palatinose dimers.

11. (Currently Amended) The process of claim 1, comprising hydrogenating condensed Palatinose ~~obtainable~~ obtained from a Palatinose melt by adding Palatinose to a solution of a catalytically active, acidic substance in water to form a mixture and heating the mixture at a temperature of 130°C to 160°C.

12. (Original) The process of claim 11, wherein the mixture comprises 4% to 12% by weight water and 0.05% to 0.5% by weight acidic substance.

13. (Currently Amended) The process of claim 11 ~~or 12~~, wherein the acidic substance is selected from the group consisting of an H⁺-loaded, strongly acidic cation exchanger, an organic acid, boric acid, and a combination of phosphoric acid with potassium dihydrogen phosphate or ammonium sulfate.

14. (Original) The process of claim 13, wherein the organic acid is citric acid.

15. (Currently Amended) The process of ~~any one of claims~~ claim 11 to 14, wherein the condensed Palatinose comprises 15% to 45% by weight uncondensed Palatinose, 35% to 60% by weight Palatinose dimers, less than 10% by weight Palatinose trimers, and less than 5% by weight Palatinose tetramers and Palatinose pentamers.

16. (Currently Amended) The process of ~~any one of claims 2 to~~ claim 15, wherein the fraction of uncondensed Palatinose in the condensed Palatinose ~~for hydrogenation~~ is reduced by depletion.

17. (Currently Amended) The process of claim 16, wherein the uncondensed Palatinose is depleted by ~~means of~~ chromatographic separation of the uncondensed Palatinose from condensed Palatinose.

18. (Currently Amended) The process of ~~any one of claims~~ claim 1 to 17, wherein the catalytic hydrogenation of the solution comprising condensed Palatinose takes place at elevated temperature under ~~increased~~ elevated pressure in the presence of hydrogen and using a catalyst.

19. (Original) The process of claim 18, wherein the solution comprising condensed Palatinose is adjusted to a pH of 6 to 8 prior to hydrogenation.

20. (Original) The process of claim 19, wherein the pH of the solution comprising condensed Palatinose is adjusted to 7.8 by adding aqueous sodium hydroxide solution.

21. (Currently Amended) The process of ~~any one of claims~~ claim 18 to 20, wherein the hydrogenation takes place at a temperature of 40°C to 140°C.

22. (Original) The process of claim 21, wherein the hydrogenation takes place at a temperature of 60°C to 80°C.

23. (Original) The process of claim 22, wherein the hydrogenation takes place at a temperature of 70°C.

24. (Currently Amended) The process of ~~any one of claims~~ claim 18 ~~to 23~~, wherein the hydrogenation takes place at a pressure of 50 to 230 bar.

25. (Original) The process of claim 24, wherein the pressure is 100 to 200 bar.

26. (Original) The process of claim 25, wherein the pressure is 150 bar.

27. (Currently Amended) The process of ~~any one of claims~~ claim 18 ~~to 26~~, wherein the catalyst comprises a mixture of a pure Raney metal and a Raney metal alloy.

28. (Original) The process of claim 27, wherein the Raney metal is nickel, copper, cobalt or iron.

29. (Currently Amended) The process of claim 27, wherein the Raney metal alloy is an alloy of nickel, copper, cobalt or iron with a material selected from the group consisting of aluminum, tin ~~or~~ and silicon.

30. (Currently Amended) The process of ~~any one of claims~~ claim 18 ~~to 26~~, wherein the catalyst comprises as an active component one or more metals from transition group VIII of the periodic table on a support.

31. (Currently Amended) The process of claim 30, wherein the active component comprises at least one of ruthenium, palladium ~~and/or~~ and rhodium.

32. (Currently Amended) The process of claim 30 ~~or 31~~, wherein the catalyst support comprises at least one of activated carbon, aluminum oxide, zirconium oxide ~~and/or~~ and titanium dioxide.

33. (Currently Amended) The process of ~~any one of claims~~ claim 18 to 32, wherein the hydrogenation takes place with stirring.

34. (Currently Amended) The process of ~~any one of claims~~ claim 18 to 33, wherein the hydrogenation takes place over a period of at least 2 to 5 hours.

35. (Original) The process of claim 34, wherein the hydrogenation takes place over a period of at least 4 hours.

36. (Currently Amended) The process of ~~any one of claims~~ claim 18 to 35, wherein the hydrogenation takes place continuously, semibatchwise or batchwise.

37. (Currently Amended) The process of ~~any one of claims~~ claim 18 to 36, wherein the hydrogenation is carried out in a fixed-bed process or a suspension process.

38. (Currently Amended) The process of ~~any one of claims~~ claim 1 to 37, wherein, following hydrogenation of the solution comprising condensed Palatinose, a product mixture is obtained that comprises 25% to 36% by weight hydrogenated condensed Palatinose having a DP of 4, 9% to 15% by weight hydrogenated condensed Palatinose having a DP of 6, 3% to 7% by weight hydrogenated condensed Palatinose having a DP of 8, 3% to 7% by weight hydrogenated condensed Palatinose having a DP of 10, 3% to 7% by weight unhydrogenated condensed Palatinose, and 40% to 55% by weight hydrogenated uncondensed Palatinose.

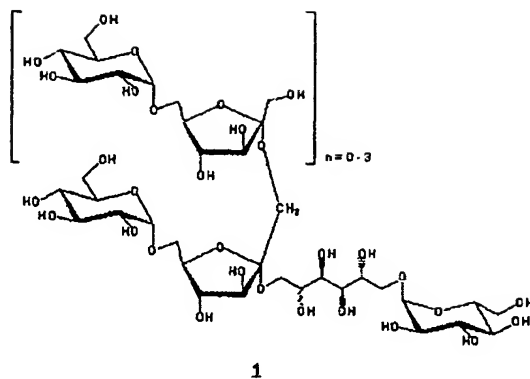
39. (Currently Amended) The process of ~~any one of claims claim 1 to 38~~, wherein, following hydrogenation, hydrogenated condensed Palatinose having a DP of 4 to 10 is separated from the reaction mixture.

40. (Currently Amended) The process of claim 39, wherein said hydrogenated condensed Palatinose having a DP of 4 to 10 is separated from the reaction mixture by ~~means of~~ chromatography.

41. (Currently Amended) The process of claim 39 ~~and 40~~, wherein the hydrogenated condensed Palatinose, following separation from the reaction mixture, comprises 30% to 55% by weight hydrogenated condensed Palatinose having a DP of 4, 20% to 30% by weight hydrogenated condensed Palatinose having a DP of 6, 7% to 13% by weight hydrogenated condensed Palatinose having a DP of 8, and 2% to 6% by weight hydrogenated condensed Palatinose having a DP of 10.

42. (Currently Amended) A hydrogenated condensed Palatinose ~~obtainable~~ obtained by hydrogenating condensed Palatinose according to ~~any one of the processes~~ process of ~~any one of claims claim 1 to 39~~, said hydrogenated condensed Palatinose comprising at least hydrogenated condensed Palatinose having a DP of 4, hydrogenated condensed Palatinose having a DP of 6, hydrogenated condensed Palatinose having a DP of 8, and hydrogenated condensed Palatinose having a DP of 10.

43. (Currently Amended) The hydrogenated condensed Palatinose of claim 42, comprising at least one compound of the formula (1)



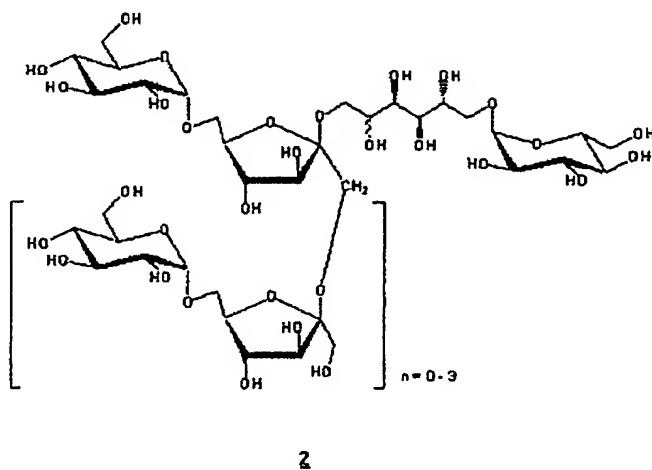
obtainable obtained from α -2 \rightarrow 1-linked di-Palatinose, for $n = 0$ (DP 4):

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 1)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 1)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-mannitol;

at least one compound of the formula (2)



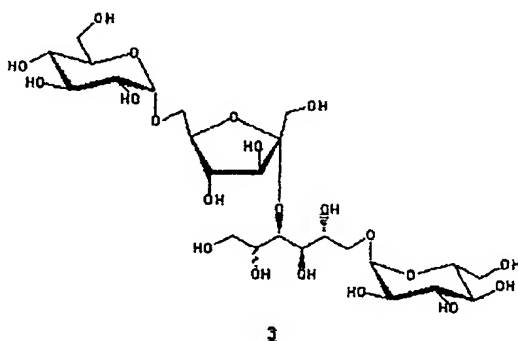
~~obtainable~~ obtained from β -2 \rightarrow 1-linked di-Palatinose for $n = 0$ (DP 4):

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 1)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 1)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-mannitol;

at least one compound of the formula (3)



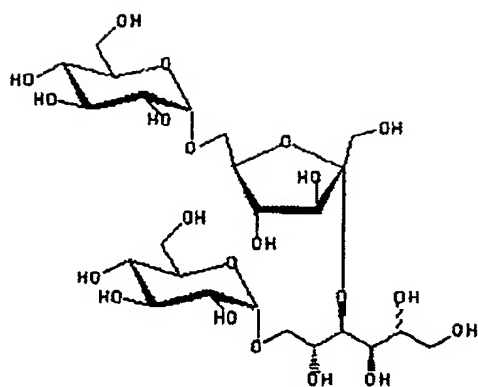
~~obtainable~~ obtained from α -2 \rightarrow 3-linked di-Palatinose:

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 3)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 4)-O-[α -D-glucopyranosyl-(1 \rightarrow 1)]-D-mannitol;

at least one compound of the formula (4)



4

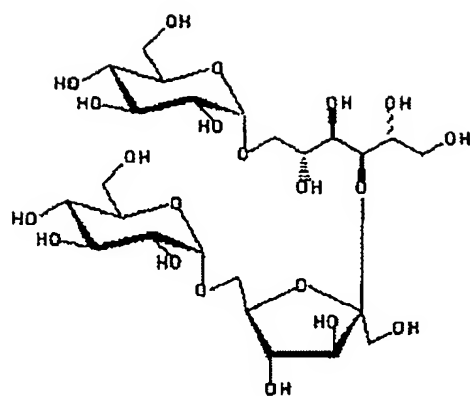
~~obtainable~~ obtained from α -2 \rightarrow 4-linked di-Palatinose:

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 4)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- α -D-fructofuranosyl-(2 \rightarrow 3)-O-[α -D-glucopyranosyl-(1 \rightarrow 1)]-D-mannitol;

at least one compound of the formula (5)



5

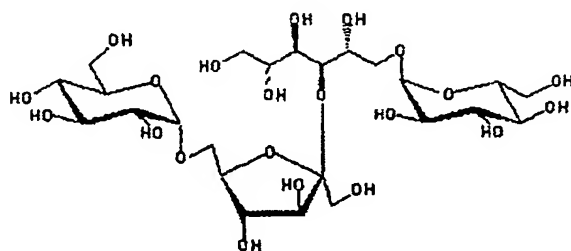
~~obtainable~~ obtained from β -2 \rightarrow 3-linked di-Palatinose:

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 3)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 4)-O-[α -D-glucopyranosyl-(1 \rightarrow 1)]-D-mannitol; and

and at least one compound of the formula (6)



6

~~obtainable~~ obtained from β -2 \rightarrow 4-linked di-Palatinose:

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 4)-O-[α -D-glucopyranosyl-(1 \rightarrow 6)]-D-sorbitol

and

O- α -D-glucopyranosyl-(1 \rightarrow 6)- β -D-fructofuranosyl-(2 \rightarrow 3)-O-[α -D-glucopyranosyl-(1 \rightarrow 1)]-D-mannitol.

44. (Currently Amended) The hydrogenated condensed Palatinose of claim 42 ~~or 43~~, wherein the fraction of hydrogenated condensed Palatinose having a DP of 4 is 30% to 55% by weight, the fraction of hydrogenated condensed Palatinose having a DP of 6 is 20% to 30% by weight, the fraction of hydrogenated condensed Palatinose having a DP of 8 is 7% to 13% by weight, and the fraction of hydrogenated condensed Palatinose having a DP of 10 is 2% to 6% by weight.

45. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ claims claim 42 ~~to 44~~, wherein the fraction of hydrogenated condensed Palatinose having a DP of 4 is 35% to 50% by weight.

46. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ claims claim 42 ~~to 45~~, wherein the fraction of hydrogenated condensed Palatinose having a DP of 6 is 22% to 28% by weight.

47. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ claims claim 42 ~~to 46~~, wherein the fraction of hydrogenated condensed Palatinose having a DP of 8 is 8% to 12% by weight.

48. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ claims claim 42 ~~to 47~~, wherein the fraction of hydrogenated condensed Palatinose having a DP of 10 is 3% to 5% by weight.

49. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ ~~claims claim~~ 42 to 48, further comprising 6% to 12% by weight unhydrogenated condensed Palatinose having a DP of 4.

50. (Currently Amended) The hydrogenated condensed Palatinose of ~~any one of~~ ~~claims claim~~ 42 to 49, which is at least substantially resistant ~~or virtually resistant~~ to breakdown in the at least one of a mammalian stomach ~~and/or and by the enzymes of the a~~ mammalian digestive tract.

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Canceled)

55. (Canceled)

56. (Canceled)

57. (Canceled)

58. (Canceled)

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Canceled)

64. (Canceled)

65. (Canceled)

66. (Currently Amended) A composition comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~and 50~~ and cultures of Bifidobacteria.

67. (Currently Amended) A composition comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~ and at least one further form of fiber selected from the group consisting of short-chain fructo-oligosaccharides, long-chain fructo-oligosaccharides, galacto-oligosaccharides, hydrolyzed guar gum, lactulose, xylo-oligosaccharides, lactosucrose, malto-oligosaccharides, isomalto-oligosaccharides, gentio-oligosaccharides, glucosyl sucrose, soybean oligosaccharides, chito-oligosaccharides, chitosan oligosaccharides, resistant starch, oat fiber, wheat fiber, vegetable fiber, fruit fiber, celluloses, and sugar beet fiber.

68. (Currently Amended) A foodstuff ~~of any kind~~ comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~.

69. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff is selected from the group consisting of ~~in question comprises~~ dairy products and milk products.

70. (Currently Amended) The foodstuff of claim 69, wherein ~~the~~ said dairy products and milk products are selected from the group consisting of cheese, butter, yogurt, kefir, quark, sour milk, buttermilk, cream, condensed milk, dry milk, whey, lactose, milk protein, milk mixture, half-fat milk, whey mixture, and milk fat products.

71. (Currently Amended) The foodstuff of claim 68, wherein the food stuff ~~food in question~~ comprises bakery products.

72. (Currently Amended) The foodstuff of claim 71, wherein the said bakery products ~~comprise~~ are selected from the group consisting of bread, including cookies, and fine bakery products, including nonperishable bakery products.

73. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises ~~spreads~~ a spread for bread.

74. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises at least one of margarine products and cooking fats.

75. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises at least one of instant products and stock products.

76. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises a fruit products ~~product~~.

77. (Currently Amended) The foodstuff of ~~claims~~ claim 76, wherein the foodstuff ~~in question~~ comprises at least one of marmalades, jams, jellies, fruit conserves, fruit pulps, fruit juices, fruit juice concentrates, fruit nectar, and fruit powders.

78. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises a vegetable products ~~product~~.

79. (Currently Amended) The foodstuff of claim 78, wherein the foodstuff ~~in question~~ comprises at least one of vegetable conserves, vegetable juices, and vegetable pulp.

80. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises a spice mixtures ~~mixture~~.

81. (Currently Amended) The foodstuff of claim 68, wherein the foodstuff ~~in question~~ comprises at least one of nonalcoholic beverages, beverage base materials, and beverage powders.

82. (Currently Amended) The foodstuff of ~~any one of claims~~ claim 68 ~~to 81~~, which is a reduced-calorie foodstuff.

83. (Currently Amended) A confectionery product comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~.

84. (Currently Amended) The confectionery product of claim 83, wherein said product ~~comprises~~ is selected from the group consisting of chocolate, hard caramels, soft caramels, fondant products, jelly products, licorices, marshmallow products, desiccated coconut, coated chocolate candies, compressed candy products, candied fruits, cracknel, nougat products, ice confections, marzipan, chewing gum, muesli bars, ~~and also~~ ice cream and alcoholic and nonalcoholic sweet drinks.

85. (Currently Amended) The confectionery product of claim 83 ~~or 84~~, wherein said product comprises a reduced-calorie confectionery ~~products~~ product.

86. (Currently Amended) A dietetic specialty food, ~~especially~~ particularly useful for the nutrition of persons having glucose intolerance, comprising hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~.

87. (Currently Amended) An infant food, comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~.

88. (Currently Amended) A sweetener comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 ~~to 50~~.

89. (Currently Amended) A pharmaceutical composition comprising the hydrogenated condensed Palatinose of ~~any one of claims~~ claim 42 to 50.

90. (Currently Amended) The pharmaceutical composition of claim 89, comprising hydrogenated condensed Palatinose as an active substance.

91. (Currently Amended) The pharmaceutical composition of claim 89, comprising hydrogenated condensed Palatinose as a pharmaceutical carrier.

92. (New) A method for preventing or treating a disease caused due to oxidative stress, said method comprising administering to a subject in need thereof a therapeutically effective amount of the hydrogenated condensed Palatinose of claim 42.

93. (New) The method of claim 92, wherein the disease is selected from the group consisting of cancer, diabetes I and II, hypertension, stroke, male infertility, rheumatic illnesses, coronary artery illnesses, acute myocardial infarction and chronic inflammatory diseases.

94. (New) A method for strengthening the immune system of a subject against infection, said method comprising administering to a subject in need of such strengthening a therapeutically effective amount of the hydrogenated condensed Palatinose of claim 42.

95. (New) The method of claim 92, wherein the hydrogenated condensed Palatinose is administered in the form of a pharmaceutical composition.

96. (New) The method of claim 95, wherein said pharmaceutical composition is in a form selected from the group consisting of a suspension, a syrup, a tablet, a pill, a capsule, granules and a powder.

97. (New) The method of claim 94, wherein the hydrogenated condensed Palatinose is administered in the form of a pharmaceutical composition.

98. (New) The method of claim 97, wherein said pharmaceutical composition is in a form selected from the group consisting of a suspension, a syrup, a tablet, a pill, a capsule, granules, and a powder.

99. (New) A method for forming a pharmaceutical carrier for a pharmaceutical composition, wherein the method comprises including in said pharmaceutical carrier an effective amount of the hydrogenated condensed Palatinose of claim 42.

100. (New) A method for forming a pharmaceutical composition for preventing or treating a disease caused by oxidative stress, wherein the method comprising incorporating into the pharmaceutical composition a sufficient amount of the hydrogenated condensed Palatinose of claim 42 to prevent or treat said disease in a subject in need thereof.

101. (New) A method for forming a pharmaceutical composition for strengthening the immune system of a subject against infection, wherein the method comprises incorporating into the pharmaceutical composition a sufficient amount of the hydrogenated condensed Palatinose of claim 42 to strengthen the immune system of a subject in need thereof.

102. (New) A method for preparing a foodstuff or a drink intended for human consumption which comprises adding to the foodstuff or drink an amount of the hydrogenated condensed Palatinose of claim 42 effective to produce a desired result.

103. (New) The method of claim 102, wherein said hydrogenated condensed Palatinose is added to the foodstuff or drink as a soluble fiber.

104. (New) The method of claim 103, wherein said fiber is a prebiotic fiber.

105. (New) A method for modulating the glycemic properties of foodstuffs or confectionery products, wherein the method comprises adding to the foodstuff or confectionery product an amount of the hydrogenated condensed Palatinose of claim 42 effective to modulate the glycemic properties thereof.

106. (New) A method for producing a sweetening composition which comprises incorporating into the composition an effective amount of the hydrogenated condensed Palatinose of claim 42.

107. (New) A method for preparing a foodstuff or a confectionery, which comprises incorporating into the foodstuff or confectionery the hydrogenated condensed Palatinose of claim 42.

108. (New) The method of claim 107, wherein the foodstuff is an acidic foodstuff having a pH of 2 to 5.

109. (New) The method of claim 108 wherein the pH is 2 to 4.

110. (New) A method for preparing fruit juice or a fruit preparation which comprises incorporating into the juice or preparation the hydrogenated condensed Palatinose of claim 42.